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(d) All transmitters marketed for use under this subpart shall be certificated by the Federal Communications Commission. (Refer to subpart J of part 2 of the Commission's Rules and Regulations.)

(e) Remote pickup broadcast station equipment authorized to be used pursuant to an application accepted for filing prior to December 1, 1977, may continue to be used by the licensee or its successors or assignees: *Provided, however,* If operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the Commission may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

(f) Each instrument of authority which permits operation of a remote pickup broadcast station or system using equipment which has not been certificated will specify the particular transmitting equipment which the licensee is authorized to use.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 14728, Mar. 16, 1977; 42 FR 43636, Aug. 30, 1977; 43 FR 14661, Apr. 7, 1978; 45 FR 28142, Apr. 28, 1980; 63 FR 36604, July 7, 1998]

§ 74.452 Equipment changes.

(a) Prior Commission approval is required for any change in the overall height of an antenna structure, except where notice to the Federal Aviation Administration is specifically not required under § 17.14(b) of the Commission's rules and regulations.

(b) The licensee of a remote pickup broadcast station may, except as set forth in paragraph (d) of this section, make any other changes in the equipment that are deemed desirable or necessary, including replacement with certificated equipment, without prior Commission approval: *Provided,* The proposed changes will not depart from any of the terms of the station or system authorization or the Commission's technical rules governing this service: *And provided further,* That any changes made to certificated transmitting equipment shall be in compliance with the provisions of Part 2 of the Commission's rules and regulations concerning modification to certificated equipment.

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(c) The FCC at Federal Communications Commission, Broadcast Auxiliary Radio Services, 1270 Fairfield Road, Gettysburg, Pennsylvania 17325 shall be promptly notified of any equipment changes made pursuant to paragraph (b) of this section.

(d) All transmitters initially installed after November 30, 1977, must be certificated for use in this service or other services as specified in § 74.451(a).

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 42 FR 14728, Mar. 16, 1977; 42 FR 43636, Aug. 30, 1977; 43 FR 14662, Apr. 7, 1978; 47 FR 54448, Dec. 3, 1982; 58 FR 19775, Apr. 16, 1993; 63 FR 36604, July 7, 1998]

§ 74.461 Transmitter power.

(a) Transmitter power is the power at the transmitter output terminals and delivered to the antenna, antenna transmission line, or any other impedance-matched, radio frequency load. For the purpose of this Subpart, the transmitter power is the carrier power.

(b) The authorized transmitter power for a remote pickup broadcast station shall be limited to that necessary for satisfactory service and, in any event, shall not be greater than 100 watts, except that a station to be operated aboard an aircraft shall normally be limited to a maximum authorized power of 15 watts. Specific authorization to operate stations on board aircraft with an output power exceeding 15 watts will be issued only upon an adequate engineering showing of need, and of the procedures that will be taken to avoid harmful interference to other licensees.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 43 FR 14662, Apr. 7, 1978]

§ 74.462 Authorized bandwidth and emissions.

(a) Each authorization for a new remote pickup broadcast station or system issued pursuant to an application accepted after (one year following the effective date of these rules) shall require the use of certificated equipment and such equipment shall be operated in accordance with emission specifications included in the certificated grant

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and as prescribed in paragraphs (b), (c), and (d) of this section.

(b) The maximum authorized bandwidth of emissions corresponding to the types of emissions specified below,

and the maximum authorized frequency deviation in the case of frequency or phase modulated emission, shall be as follows:

Frequencies (megahertz)	Authorized bandwidth ¹ (kilohertz)	Maximum frequency deviation ² (kilohertz)	Type of emission ^{3,4}
25.87 to 26.03	40	10	A3, F3, F3Y, F9
26.07 to 26.47	20	5	A3, F3, F3Y, F9
152.87 to 153.35 ⁵	30/60	5/10	A3, F3, F3Y, F9
160.89 to 161.37	60	10	A1, A2, A3, F1, F2, F3, F3Y, F9
161.64 to 161.76	30	5	A1, A2, A3, F1, F2, F3, F3Y, F9
166.25 to 170.15	25	5	A1, A2, A3, F1, F2, F3, F3Y, F9
450 to 455.99 (10 kHz channels)	10	1.5	A1, A2, A3, F1, F2, F3, F9
450.0875 to 455.6125 (25 kHz channels)	25	5	A1, A2, A3, F1, F2, F3, F3Y, F9
450.05 to 455.85 (50 kHz channels)	50	10	A1, A2, A3, F1, F2, F3Y, F9
450.925 and 455.925 (100 kHz channels)	100	35	A1, A2, A3, F1, F2, F3, F3Y, F9

¹ Notwithstanding the authorized bandwidths shown in the table, not more than 20 kHz bandwidth will be authorized in the case of F3Y emission.

² Applies where class F1, F2, F3, or F9 emission is used.

³ Stations operating above 450 MHz shall show a need for employing A1, A2, F1, or F2 emission.

⁴ The emission designators shown in the table no longer conform to those contained in subpart C of part 2 of the Commission's Rules and Regulations. They will be so-conformed after necessary modifications to broadcast auxiliary application processing programs are completed. For transmitting equipment which is certificated, emission designators will appear in the Commission's database. Equipment approved for emissions contained in subpart C of part 2 may be used by part 74 stations if their emissions are equivalent to the previous emission designators shown in the table.

⁵ New or modified licenses for use of the frequencies will not be granted to utilize transmitters on board aircraft, or to use a bandwidth in excess of 3 kHz and maximum deviation exceeding 5 kHz.

(c) The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) On any frequency removed from the assignment frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;

(2) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;

(3) On any frequency removed from the assigned frequency by more than 250 percent on the authorized bandwidth; at least 43 plus $10 \log_{10}$ (mean output power, in watts) dB.

(d) In the event a station's emissions outside its authorized channel cause harmful interference, the Commission may, at its discretion, require the licensee to take such further steps as may be necessary to eliminate the interference.

(e) The maximum authorized bandwidth for stations operating on 1606, 1622, or 1646 kHz shall be 10 kHz and operations on these frequencies shall be limited to A3 emission only.

(f) For those transmitters using the F3Y emission and operating in the frequency range between 25.87 MHz and 170.15 MHz, the power of any emission shall be attenuated below the unmodulated carrier power (P) in accordance with the following schedule:

(1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (F_d in kHz) of more than 5 kHz, up to and including 10 kHz: At least $83 \log_{10} (F_d/5)$ decibels;

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (F_d in kHz) of more than 10 kHz, up to and including 250 percent of the authorized bandwidth: At least $29 \log_{10} ((F_d) \exp(2/11))$ decibels or 50 decibels, whichever is the lesser attenuation.

(3) On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: At least 43 plus $10 \log_{10}$ (output power in watts) decibels or 80 decibels, whichever is the lesser attenuation.

(g) For those transmitters using the F3Y emission and operating in the frequency range between 450.01 MHz and 455.925 MHz, the power of any emission

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shall be attenuated below the unmodulated carrier power (P) in accordance with the following schedule:

(1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (F_d in kHz) of more than 5 kHz, up to and including 10 kHz: At least $83 \log_{10} (F_d/5)$ decibels;

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (F_d in kHz) of more than 10 kHz, up to and including 250 percent of the authorized bandwidth: At least $116 \log_{10} (F_d/6.1)$ decibels or 70 decibels, whichever is the lesser attenuation.

(3) On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log_{10}$ (output power in watts) decibels or 80 decibels, whichever is the lesser attenuation.

NOTE: The measurements of emission power can be expressed in peak or mean values provided they are expressed in the same parameters as the unmodulated transmitter carrier power.

(Sec. 5, 48 Stat. 1068; 47 U.S.C. 155)

[41 FR 29686, July 19, 1976, as amended at 41 FR 32429, Aug. 3, 1976; 41 FR 35068, Aug. 19, 1976; 43 FR 14662, Apr. 7, 1978; 43 FR 38391, Aug. 28, 1978; 44 FR 65765, Nov. 15, 1979; 56 FR 28498, June 21, 1991; 63 FR 36604, July 7, 1998]

§ 74.463 Modulation requirements.

(a) Each new remote pickup broadcast station authorized to operate with a power output in excess of 3 watts shall be equipped with a device which will automatically prevent modulation in excess of the limits set forth in this subpart.

(b) If amplitude modulation is employed, modulation shall not exceed 100 percent on negative peaks.

(c) If frequency modulation is employed, emission shall conform to the requirements specified in § 74.462.

[41 FR 29686, July 19, 1976, as amended at 47 FR 54448, Dec. 3, 1982]

§ 74.464 Frequency tolerance.

The licensee of a remote pickup broadcast station or system shall maintain the operating frequency of

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each such station in accordance with the following:

Frequency range	Tolerance (percent)	
	Base station	Mobile station
1.6 to 2 MHz:		
200 W or less	0.01	0.02
Over 200 W ¹ .....	.005	.02
25 to 30 MHz:		
3 W or less .....	.002	.005
Over 3 W .....	.002	.002
30 to 300 MHz:		
3 W or less .....	.0005	.005
Over 3 W .....	.0005	.0005
300 to 500 MHz, all powers .....	.00025	.0005

¹The listing of tolerances for power over 200 W is in accordance with treaty values and shall not be construed as a finding that such power will be authorized.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[41 FR 29686, July 19, 1976, as amended at 42 FR 2071, Jan. 10, 1977; 43 FR 38391, Aug. 28, 1978; 44 FR 65765, Nov. 15, 1979]

§ 74.465 Frequency monitors and measurements.

The licensee of a remote pickup station or system shall provide the necessary means to assure that all operating frequencies are maintained within the allowed tolerances.

[51 FR 4603, Feb. 6, 1986]

§ 74.482 Station identification.

(a) Each remote pickup broadcast station shall be identified by the transmission of the assigned station or system call sign, or by the call sign of the associated broadcast station. For systems, the licensee (including a part 73-only licensee where operation takes place pursuant to § 74.24) shall assign a unit designator to each station in the system. The call sign (and unit designator, where appropriate) shall be transmitted at the beginning and end of each period of operation. A period of operation may consist of a single continuous transmission, or a series of intermittent transmissions pertaining to a single event.

(b) In cases where a period of operation is of more than one hour duration identification of remote pickup broadcast stations participating in the operation shall be made at approximately one-hour intervals. Identification transmissions during operation need not be made when to make such